

**PART I Authorization to Operate**

- A. The permittee is authorized to operate Class V Injection Wells at the facility described in the 2009 Permit Re-Issuance Application and the associated 2009 Work Plan; and in the cover page of this permit, in accordance with the provisions set forth in this permit.
- B. This permit and the authorization to inject shall remain in effect until the expiration date stated on the cover page of this permit. If the permittee desires to continue injection past the expiration date of this permit, the permittee shall request a permit reissuance at least 180 days prior to expiration of this permit.

**PART II Construction Requirements**

- A. Injection Well Requirements

The permittee shall inject only the carbon donor and nutrients solutions as described in the Permit Re-Issuance Application and associated Work Plan.

- B. Modifications

Approval of the Alabama Department of Environmental Management (ADEM) shall be obtained prior to modification of any injection well or supporting surface. Modification shall mean any action that will change the configuration of the well beneath the surface, the methods of monitoring injection, or will result in injection of a fluid not specifically authorized by this permit.

**PART III Monitoring and Operating Requirements**

- A. Injection Fluid

The permittee shall not inject any substance that is defined as hazardous or toxic by Federal or State laws or regulations or any substance not identified in the application for this permit. The proposed use of substances other than those identified in the permit application must be reviewed and approved by the Department prior to use.

- B. Operation

The injection wells operated under this permit shall function properly and injection fluid shall not surface or saturate the uppermost soil layer. Should the injection well fail to function properly, the permittee shall take corrective action, to include cessation of injection, as required by ADEM.

## **PART IV      Records, Reports, & Submittals**

### **A.      Records**

1.      The permittee shall record the information listed below for all monitoring activities:
  - a)      The date, exact place, and time of sampling or sampling measurement(s);
  - b)      The name of individual(s) who perform the sampling or measurement(s);
  - c)      The date(s) analyses were performed;
  - d)      The name of the individual(s) who performed the analyses;
  - e)      The analytical or technical methods used; and
  - f)      The results of each analysis performed.
2.      The permittee shall retain all records concerning the data used to complete the permit application, the operation of the wells, and the nature and composition of pollutants injected; to include records of the calibration of instruments, meters and gauges, quality control records, and recordings from continuous monitoring instrumentation; until at least three years after the closure of wells.
3.      When requested by ADEM, the permittee shall deliver copies of any of the records maintained in accordance with this permit.

### **B.      Reports**

1.      The permittee shall submit to ADEM written confirmation of all injection that occurs. The written confirmation shall be submitted on a monthly basis during injection and shall include the information listed below:
  - a)      The dates of the injection.
  - b)      The amount of solution injected.
  - c)      The location(s) of the injection.

2. The permittee shall submit ground water monitoring reports not later than 28 days after each monitoring event. The reports shall include:
  - a) The date, and exact place of sampling;
  - b) The complete chain-of-custody forms for all samples collected;
  - c) The results of each analysis performed.
3. The permittee shall sample the monitoring wells in accordance with the 2009 Permit Re-Issuance Application and associated Work Plan.
4. The permittee shall report to ADEM any of the following:
  - a) Any planned action which will change the use of the injection wells, will result in injection of a fluid different from that authorized by this permit, will change the method of operations of any injection well, or will change the method of the monitoring of well operations or injected fluids.
  - b) Any planned transfer of ownership of all or part of the permitted facility.
  - c) Any relevant facts of which the permittee becomes aware which should have been submitted in a permit application and any corrections to data previously submitted in a permit application.
5. Other Submittals

Studies, engineering reports, plans and specifications, plugging and abandonment plans, logging reports, and other technical documents submitted to comply with this permit shall be prepared by or under the supervision of qualified persons defined by Rule 6-8-.13 of the UIC Regulations of the ADEM.

## **PART V      Plugging and Abandonment**

The permittee shall perform any abandonment and closure actions that may be required by the Director of the ADEM to remove a threat to groundwater quality or to the health of persons which is caused by the injection activity.

## **PART VI      Permit Modification, Revocation, Suspension, and Termination**

- A. ADEM may impose emergency additional conditions to this permit when necessary to protect waters of the state from pollution. These conditions may include suspension of the permit to inject and shall remain in effect until the permit is modified, revoked, suspended or terminated in accordance with Rules 6-8-.12(a)3-5 and 6-8-.12(f) of the UIC Regulations of ADEM.
- B. Non-emergency permit modification, revocation, suspension, and termination actions shall be accomplished in accordance with ADEM Administrative Code Rule 335-6-8.

## **PART VII     General Provisions**

- A.     The permittee shall comply with all provisions of the UIC Regulations of ADEM and shall comply with all provisions of this permit and shall reduce or halt injection if needed to maintain compliance with the permit and regulations.
- B.     The permittee shall comply with all applicable Federal and State hazardous waste management regulations.
- C.     The permittee shall allow members of the ADEM staff to:
  - 1.     access property and records of the permittee for purposes of inspection.
  - 2.     collect samples of the injected fluids, process and wastewater streams associated with the permitted injection wells.
  - 3.     collect samples of monitoring wells.
  - 4.     obtain copies of records upon request.
- D.     The permittee shall immediately take all reasonable steps to minimize or correct any adverse environmental impact resulting from the operation of the permitted injection wells.
- E.     This permit does not convey any property rights of any sort, or any exclusive privilege.
- F.     The filing of a request by the permittee for a permit modification, revocation, and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- G.     Any noncompliance with this permit constitutes a violation of the Alabama Water Pollution Control Act and/or the Underground Injection Control Regulations and is grounds for enforcement action such as permit termination, revocation, modification; or denial of a permit renewal application.
- H.     Injection to waters of the state, which in this case is groundwater, in accordance with this permit shall not result in the exceedance of a Maximum Contaminant Level (MCL) as established by the Environmental Protection Agency. Injection to groundwater, in accordance with this permit shall not result in a violation of a surface water quality standard.

ADEM Permit Rationale

Date: January 22, 2010

Prepared by: Joe Kelly

Permittee Name: Glenn Springs Holdings, Inc. attention President Mike Anderson, 5005 LBJ Freeway, Suite 1350, Dallas, TX 75244-6119.

Facility Name: Occidental Chemical Corporation, Muscle Shoals

Location: 1000 N. Wilson Dam Road  
Muscle Shoals  
Colbert County, Alabama  
Lat: N 34.770500/W -87.634500  
Town 3S, Range 10 W, Section 30

UIC Permit Number ALSI9917566

Draft Permit is: Reissuance with Modification

Injection Description: injection of nutrients and carbon donor solution to aid in the remediation of groundwater contamination.

Discussion: Standard permit drafted.